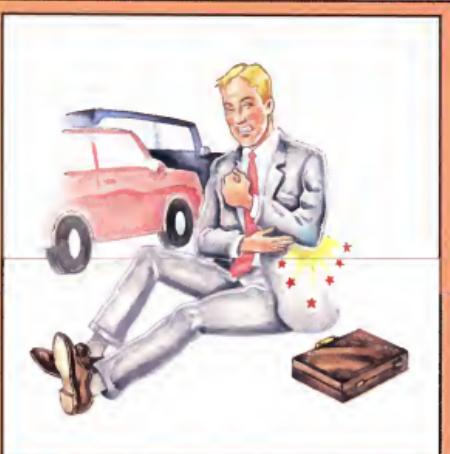
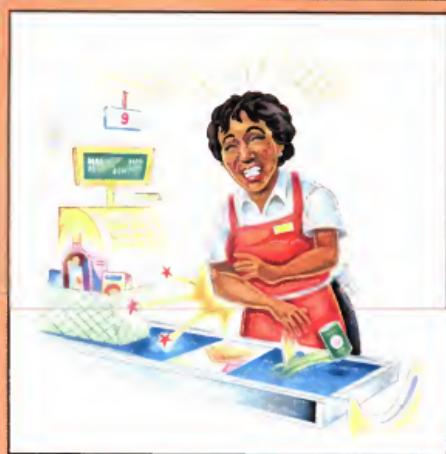


# Elbow Owner's Manual

Treating and Preventing  
Common Elbow Problems



# Common Elbow Problems

Your elbow is a joint you probably don't think about much. That is, until it starts to hurt. When it does, the pain can really get in your way. This booklet will help you understand the most common elbow problems and what to do about them.

## Epicondylitis

Page 6

Using an elbow or hand the same way over and over or with poor technique can cause epicondylitis. This is inflammation or a tiny tear in a muscle or tendon on either side of the elbow. It can cause pain, making it hard to grip things, to turn your hand, or to swing your arm. Many athletes get the problem, so it is often called tennis elbow or golfer's elbow. But most cases are not due to sports.



## Fractures

Page 10

Falling on your elbow or whacking it on something hard may crack or break a bone. Your elbow can then swell and hurt, making it hard to move your arm.



## Bursitis

Page 12

A fluid-filled sac called the **bursa** cushions the tip of your elbow. Banging the tip hard or using the elbow too much can make the bursa swell and hurt. This is called bursitis, which means inflammation of the bursa.



## Cubital Tunnel Syndrome

Page 13

Your "funny bone" is actually a nerve that runs through your elbow. If this nerve gets irritated, your elbow may ache or your little finger and ring finger may feel tingly or numb. Irritation can be caused by overuse of the elbow, leaning too hard on it, or banging it on something. Swelling caused by some other problem can also irritate the nerve.



This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

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# Diagnosing and Treating Elbow Problems

Some elbow problems go away on their own. But many get worse if you put off taking care of them. Your healthcare provider can diagnose your elbow problem and suggest the best treatment.

## Pinpointing the Problem

Your healthcare provider will ask questions about your injury. He or she will then look at and feel your elbow and have you move it in all directions. Tests can help identify your problem. You may have one or more of the following:

- **An x-ray** shows damage to the bones.
- **A CT (or CAT) scan** shows damage to the bones and soft tissues.
- **An MRI** (magnetic resonance imaging) shows damage to the soft tissues.
- **A nerve conduction study (NCS) and electromyography (EMG)** measure how well your elbow's nerves and muscles work.
- **Aspiration** is the process of taking fluid out of your elbow. This may be done to check the fluid or as a treatment.
- **Arthroscopy** is a kind of surgery that lets a doctor see inside your elbow with a small TV camera. It may be used to diagnose the problem, to treat it, or both.



## Treatment Can Help

Once the problem is diagnosed, your healthcare provider may recommend one or more of the following treatments:

- **RICE.** If the problem came on suddenly, you may find relief with RICE: Rest it, put Ice on it, Compress it with an elastic wrap, and Elevate it above your heart when lying down.
- **Medications and therapy.** These can reduce pain and inflammation. A splint, brace, or other aid may help support the elbow as it heals. Your healthcare provider may assign you exercises to speed recovery.
- **Surgery.** Some elbow problems require surgical treatment. Arthroscopic surgery uses only a few small incisions. Open surgery involves a larger incision.

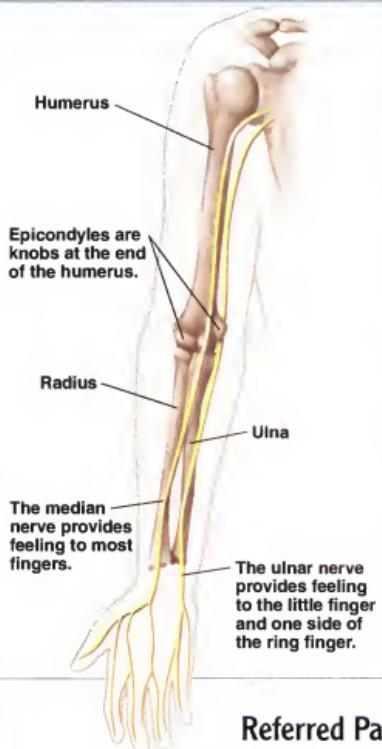
# A Healthy Elbow

Bones, muscles, tendons, and nerves work together to move your arm and hand. The elbow is where they all meet. When these parts of your arm are healthy, you can bend and straighten your arm and move your hand without pain.

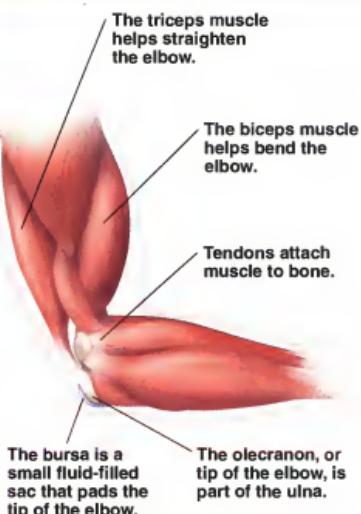
## Parts of the Elbow

- The arm has three bones. The humerus is the bone in the upper arm. The radius is the forearm bone closest to your thumb. The ulna is the forearm bone closest to your little finger.
- The arm muscles cross the elbow joint and help move the arm.
- Tendons are the tough tissues that attach muscles to bones.
- The nerves that control the hand and wrist also pass through the elbow.

Front View



Side View



## Referred Pain

Pain felt in one area of the body can actually be due to a problem elsewhere in the body. This is called referred pain. Your neck or other areas may be checked for problems that could be causing elbow pain.

## The Elbow in Motion

The elbow joint is involved as your arm turns, bends, and straightens during your daily tasks. Here are some of the ways the elbow moves to allow your hand and arm to work:



### Straightening

Straightening the elbow to move the hand away from the body is called **extension**.



### Bending

Bending the elbow to move the hand toward the body is called **flexion**.



### Turning Palm Up

Rotating the forearm to turn the palm up is called **supination**.



### Neutral

Holding the palm sideways, as if to shake hands, is called the **neutral** position. This position puts the least stress on the elbow.

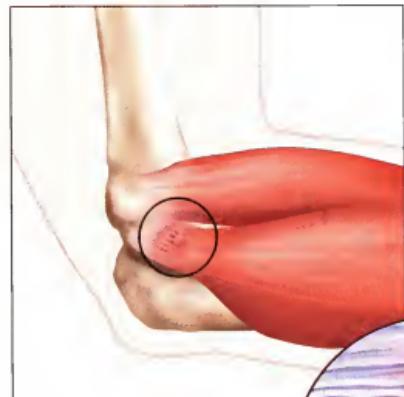
# What Is Epicondylitis?

Epicondylitis is the most common type of elbow problem. It is named for the epicondyles, the bony knobs on the inside and outside of the elbow. A muscle or tendon there may get inflamed or may develop tiny tears. If the problem is in a tendon, you may hear it called tendinitis. The main cause of the problem is using the elbow or hand the same way over and over. Treatment can help relieve pain and restore use of your elbow.

## Lateral Epicondylitis

This occurs on the lateral side of the elbow, the side farthest from your ribs. The muscles and tendons that extend your wrist, open your hand, and turn the palm up are most at risk of this problem. It is often called "tennis elbow," even though most people who get it do not play tennis. Lateral epicondylitis is the most common type.

## Outer Side of Elbow



## Medial Epicondylitis

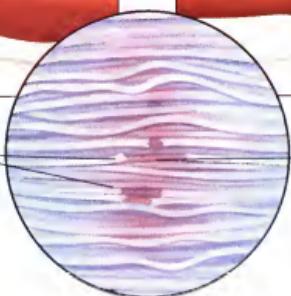
This occurs on the medial side of the elbow, the side closest to your ribs. It can be caused by a movement like a golf swing. So the problem is often called "golfer's elbow," even though most people who have it don't play golf. One or more muscles and tendons along the inner elbow may be injured.

## Inner Side of Elbow



Torn tendon fibers

Inflammation



Inflammation or even tiny tears in a muscle or tendon can make it hurt to move your elbow or hand.

# Treating Epicondylitis

The goals of treatment are to relieve the pain and to get your elbow back to work quickly and safely. Your healthcare provider will probably have you start by caring for yourself at home. If the problem persists, you might need further treatment.



## First Steps

When your elbow starts hurting, the first steps are usually to:

- Rest your elbow. Stop doing whatever you think may have caused the problem. This gives your elbow a chance to heal.
- Put ice on the hurt area for 15 to 20 minutes at a time 2 or 3 times a day for the first day or two. This helps prevent swelling and reduce pain.
- Switch back and forth between hands at work. This may be enough to take the stress off an overused elbow.

## Further Treatment

Your healthcare provider may also suggest that you do one or more of the following:

- Receive an injection of cortisone or take anti-inflammatory medication to reduce swelling and pain.
- Do motion exercises to increase your flexibility, strength, or both. You may be referred for **rehabilitation** (physical therapy or occupational therapy). Your therapist may use techniques such as ultrasound, which sends painless sound waves into your elbow to promote healing.
- Wear a splint or forearm band to reduce stress on the injured tissue.
- Have surgery to treat damaged tissue.

# Exercises for Epicondylitis

You may be asked to do exercises such as the ones below. They will help you improve and then maintain muscle flexibility. Your health-care provider will fill in the blanks. If an exercise makes your elbow pain worse, stop and consult your healthcare provider right away.

## Wrist Flexor Stretch

Flexors are muscles that help you bend your arm.

- Hold your right arm out at shoulder height. Hold your palm out, fingers up. Don't raise your shoulder.
- Put your left hand across the palm of your right hand.
- With your left hand doing the work, gently pull your right hand toward you. Don't bend your fingertips back.
- Hold for \_\_\_\_ seconds.
- Now switch hands and repeat.
- Do this with each hand \_\_\_\_ times a day.



## Wrist Extensor Stretch

Extensors are muscles that help you straighten your arm.

- Hold your right arm out at shoulder height. Hold your palm in, fingers down. Don't raise your shoulder.
- Put your left hand across the back of your right hand.
- With your left hand doing the work, gently pull your right hand toward you. Don't bend your fingertips back.
- Hold for \_\_\_\_ seconds.
- Now switch hands and repeat.
- Do this with each hand \_\_\_\_ times a day.



## Wrist Curls

- Hold a \_\_\_\_-pound weight or \_\_\_\_-ounce soup can in your hand.
- Sit with your wrist, palm down, supported over the end of your knee or edge of a table.
- Keeping your forearm on its support, curl your wrist up to lift the weight as high as you can.
- Lower your wrist back to the starting position.
- Repeat this \_\_\_\_ times (one set). Now do the same thing palm up. Do \_\_\_\_ sets a day palm up and the same number palm down.



# Keeping Epicondylitis from Coming Back

The three basic causes of epicondylitis are repetitive motions, poor technique, and poor positioning. Keep the tips below in mind as you work and as you play.

Causes of epicondylitis	Tips to prevent future problems	
Repetitive motions	At work	At play
<ul style="list-style-type: none"><li>Using elbow or hand the same way over and over.</li><li>Doing the same motion over and over, such as wrist turning, hand gripping, hand shaking, twisting movements, or use of vibrating tools.</li></ul>	<ul style="list-style-type: none"><li>Vary activities to reduce repeated motions.</li><li>Switch hands as much as you can.</li><li>Take frequent breaks.</li></ul>	<ul style="list-style-type: none"><li>Warm up before you start.</li><li>Avoid bending your elbow or wrist repeatedly.</li><li>Reduce vibration on a tennis racquet by trying nylon strings, a midsize racquet, or a different racquet material, such as graphite.</li></ul>
Poor technique	At work	At play
<ul style="list-style-type: none"><li>Reaching or gripping in an unsafe way.</li><li>Starting work or play without warming up first.</li><li>Gripping tools, racquets, or clubs too hard.</li></ul>	<ul style="list-style-type: none"><li>Pick up objects with a side or bottom grip, not a top grip.</li><li>Do warm-up stretches before starting and throughout the shift.</li><li>Don't grip objects too tightly.</li><li>Make a habit of keeping your wrists in neutral (handshake) position as much as you can.</li></ul>	<ul style="list-style-type: none"><li>Learn correct technique from a pro.</li><li>Choose equipment for a grip and weight suited to your size, strength, and ability. Get measured for the correct racquet grip size.</li><li>Warm up before playing. Gently stretch afterward.</li><li>Use whole arm (not just wrist) for tennis backstroke. Try a two-handed backstroke.</li></ul>
Poor positioning	At work	At play
<ul style="list-style-type: none"><li>Straining the elbow by reaching for something that's too far away. The more often you do this, the worse the problem becomes.</li></ul>	<ul style="list-style-type: none"><li>Keep your elbows close to your body when moving your arms.</li><li>Move your keyboard and mouse close enough to your body so you don't have to reach for them.</li><li>Stand on a raised surface so your shoulder is above any objects you reach for or grasp.</li></ul>	<ul style="list-style-type: none"><li>If the ball is out of reach, let it go.</li><li>Keep your elbows as close to your body as you can.</li><li>Keep your wrist firm and in a neutral position whenever you can.</li><li>Learn correct technique from a pro.</li></ul>

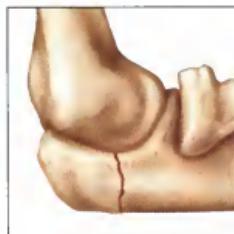
# Fractures

A fracture is a crack or break in a bone. You might fracture your elbow by falling on it or by trying to break a fall with your hand. If you suspect you might have fractured your elbow, get medical help as soon as you can. Some fractures require surgery to fix, others don't. Rehabilitation (physical therapy or occupational therapy) may help you get better faster.

## Most Common Types of Fractures

Bones break in many ways. The two most common elbow breaks are hairline fractures and displaced fractures.

Displaced fractures often require surgery.



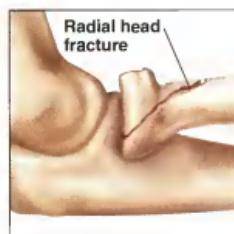
A **hairline fracture** means the bone has cracked but stayed in place.



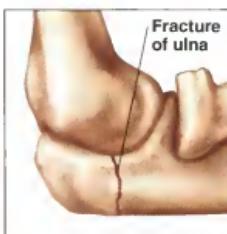
A **displaced fracture** means that the broken ends have moved out of place. If the pieces don't line up just right, surgery is required.

## Any Bone Can Break

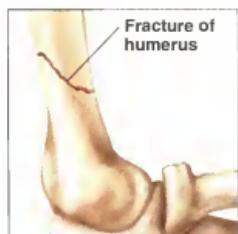
The radius fractures most often, but any of the three bones that meet in your elbow can fracture. Any bone can have any type of fracture.



**The radius** is the bone on the thumb side of your forearm. Its elbow end is called the head, so breaks there are called radial head fractures. You may just need to keep your elbow in a splint or a sling.



**The ulna** is the bone on the little-finger side of your forearm. This is the bone that forms the tip of the elbow, called the olecranon. A crack or break there may or may not need surgery.



**The humerus** is the bone in your upper arm. A fracture of the humerus can be serious. It is likely to require at least a cast and often requires surgery.

## First Steps

First, put ice on your elbow right away. This will reduce pain and help prevent swelling. Second, get medical attention quickly. Healthcare providers will:

- Make images of your elbow, such as an x-ray, CT scan, or MRI, to find the location and severity of the fracture.
- Put a splint or a cast on your arm to hold the elbow still so the bone can heal. You may also be told to keep your arm in a sling for a period of time.



## Further Treatment

Your healthcare provider may recommend one or more of the following:

- Keeping your elbow elevated when you are lying down.
- Medication for pain and inflammation to make you more comfortable as you heal.
- Surgery for a displaced fracture. The surgeon may repair the bone, remove loose pieces of bone, or use pins, screws, or wires to hold the pieces in place to heal.
- Rehabilitation to get your elbow back in business.

## Life with a Cast

If your arm is put in a cast, protect the cast so it can protect your arm. You may be told to:

- Keep it dry. If you must go out into the rain or snow, wrap the cast in plastic bags.
- Don't put objects into the cast. If your arm itches, blow cool air in with a hair dryer.
- Call your healthcare provider right away if you have tingling, numbness, swelling, or extreme pain. Call also if your fingers change color or feel very cold. If the cast feels much too tight, much too loose, or hurts, call your healthcare provider.

## Exercises to Get Going Again

Sooner or later you may be given exercises such as these. They are to strengthen your muscles and get your arm back to its full range of motion. Keep up your exercises at home. Make sure you understand all the motions of each exercise before leaving the healthcare provider's office. Follow all the instructions you are given.



### Bend and straighten.

Sit down. Turn your palm up. Slowly and gently, straighten and bend your elbow. Keep your shoulder relaxed. Repeat \_\_\_\_ times. Do this \_\_\_\_ times a day.



Turn. Gently turn your palm up and down while supporting your injured elbow with your other hand. Repeat \_\_\_\_ times. Do this \_\_\_\_ times a day.

# Bursitis

The tip of the elbow has a small cushion called the **bursa** to protect the soft tissue from injury. Overuse, bumps, or injuries can cause the bursa to become inflamed and swollen. It can even become infected. The skin at the elbow may get red and feel warm to the touch, and the area may be painful. This condition is called bursitis. Treatment can stop the pain. Wearing a pad on your elbow when needed can keep bursitis from coming back.

## Outer Side of Elbow



If inflamed, the bursa can swell to many times its original size.

## First Steps

When your elbow hurts, rest it as much as you can. Put ice and an elastic wrap on it to help reduce the swelling and pain.

- Put a cold pack on it for 15 or 20 minutes at a time, 3 or 4 times a day, or as directed by your healthcare provider.
- Always protect your skin by wrapping the cold pack with a thin cloth.

## Further Treatment

The bursa may respond to injury by filling with too much fluid. This is why it swells. Left untreated, that excess fluid may become infected. So your doctor may remove (aspirate) the excess fluid and may have it tested for infection. Your doctor may also:

- Inject your bursa with cortisone to help relieve inflammation.
- Prescribe antibiotics or anti-inflammatory medications.
- Have you wear an elbow wrap or splint for a while to keep your arm still.



## Preventing Future Problems

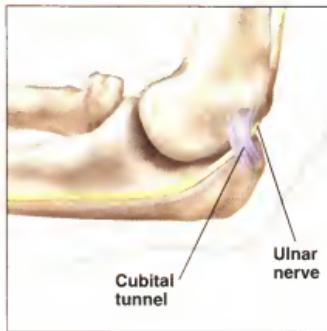
To keep bursitis from coming back, wear an elbow pad during activities in which you might bump the tip of your elbow. Try to vary your activities.

# Cubital Tunnel Syndrome

The ulnar nerve passes near the tip of the elbow through a small space called the **cubital tunnel**. Overuse of or injury to the elbow can cause inflammation of this nerve. This is called cubital tunnel syndrome (also known as ulnar neuritis, or ulnar nerve entrapment). Your elbow may ache. Your ring finger and little finger may tingle or feel numb. If this condition is not treated, permanent nerve damage may result.

## First Steps

### Inner Side of Elbow



The ulnar nerve passes through the cubital tunnel, a small opening in the elbow.

To reduce swelling and pain, stop doing what caused the problem. If you can't stop, limit the activity as much as possible. Medications may be recommended to help relieve pain and inflammation. A nerve conduction study (NCS) may be done to help diagnose the problem. NCS measures how quickly mild electrical pulses travel through your arm.

## Further Treatment

If the problem persists, try to avoid bending your elbow as much as you can. You may be asked to:

- Try to keep your hand in a neutral (handshake) position, rather than turned up or down, while using the arm.
- Wear a splint or towel around your elbow at night to keep it straight while you sleep.
- Have an injection of cortisone to reduce inflammation.
- Have surgery to reduce pressure on the nerve.

## Preventing Future Problems

It may be enough just to avoid leaning on or bending your elbow for long periods. If you must lean on the elbow, wear a pad to reduce pressure on the nerve. Try a telephone headset instead of bending your elbow to hold the phone to your ear. Vary activities so you don't overdo any one thing with your arm.



## Other Nerve Problems

The ulnar nerve is only one of the nerves that passes through your elbow. Other elbow nerves may also be irritated and cause problems.

# Use Your Elbow Wisely

Your elbow is designed to do a wide variety of activities. It is not made to do any one thing over and over. Yet work and play often mean doing the same movement for long periods. To protect your elbow, try to avoid doing the same motions and remaining in the same posture without a break. Do exercises as directed. And any time you do tasks in which your elbow is likely to get bumped, wear an elbow pad.



## Vary Activities

To help prevent injury and speed recovery, vary activities to reduce strain on your elbow. If you often do one activity, such as playing tennis, alternate that with something else, such as swimming.



## Vary Movements

Try to switch hands to give each elbow a rest. Pick up objects from the side or bottom instead of the top. If you do tasks that require a lot of elbow bending, find ways to keep your arms straighter or take frequent breaks to straighten your arms.



## Stretch and Strengthen

Stretching exercises for the elbow, wrist, and fingers help prevent injuries and maintain flexibility. If you've been prescribed elbow exercises, do them regularly. This prevents stiffness and loss of motion.

## Avoid Irritation

If your work or play is likely to subject your elbow to banging or pressure, wear an elbow pad. Avoid leaning on your elbows heavily or for long periods. Avoid bending or straightening your elbows any more than you must.

# An Elbow-Healthy Workspace

Sometimes you can't help doing the same motions over and over. Even then, a proper work setup and correct working posture help protect your elbow. Take short breaks often. And try these tips for working safely while standing, sitting, and moving around.

## Working While Standing

Don't get so wrapped up in what you're doing that you forget safe work habits:

- Keep your work within 14 to 18 inches of your body, depending on your size. If an object you need to work with is too far away, move it or yourself closer.
- Step up or change your position to avoid reaching over your head or behind your back.



## Working While Sitting

Taking a little time now to set up your work area may save you pain later:

- Raise or lower your chair, table, computer monitor, keyboard, and mouse to comfortable heights and locations.
- If you have to reach awkwardly for the mouse, move it closer. Or try a trackball or other alternatives to a mouse.
- When not actually typing or clicking, take your hands off the keyboard and mouse. Rest them in a neutral position.
- Sit up straight. Don't lean on your elbows while looking at the computer or while on the phone.



## Working While on the Move

Learn safe ways to move your elbows:

- Keep your hands in a neutral (handshake) position as much as you can, rather than turned up or down.
- Pick things up from the side or the bottom instead of the top when you can.
- Don't grip anything tighter than you have to.



# Prevent Future Elbow Problems

Follow the tips below to help your elbow heal.  
These tips may also help prevent future problems.

## Top Four Elbow Tips

- **Do your part.** Follow your healthcare provider's advice. Take any medications he or she recommends. If you are given exercises, do them as directed.
- **Keep elbows close.** Keep your elbows as close to your body as possible when lifting and carrying things.
- **Wear pads.** Wear elbow pads when doing tasks that are likely to involve leaning on or bumping your elbow.
- **Rest and ice.** If your elbow hurts, give it a rest. Put ice on it for 15 to 20 minutes at a time to reduce pain and swelling.



### Consultant:

A. Shabi Khan, MD, Orthopaedic Surgery

### With contributions by:

John L. Ceglia, PT, ATC, Physical Therapy

Barbara Cymrot, MEd, OTR

H. Roger Hansen, MD, Orthopaedic Surgery

John A. Michalski, MD, Orthopaedic Surgery

R. Graham Reedy, MD, Sports Medicine, Family Practice

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